```
                1         10        20        30        40        50        60        70        80
Consensus       MATDIDMLIDLGLDLSDSDLDEDPPEPAESRRDDLESDSSGECSSSDEDMEDPHGEDGPEPILDAARPAVRPSRPEDPGVPSTQTP
Identity        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

1. 17v2|UL54   MATDIDMLIDLGLDLSDSDLDEDPPEPAESRRDDLESDSSGECSSSDEDMEDPHGEDGPEPILDAARPAVRPSRPEDPGVPSTQTP
2. F|UL54       MATDIDMLIDLGLDLSDSDLDEDPPEPAESRRDDLESDSSGECSSSDEDMEDPHGEDGPEPILDAARPAVRPSRPEDPGVPSTQTP
3. H129|UL54    MATDIDMLIDLGLDLSDSDLDEDPPEPAESRRDDLESDSSGECSSSDEDMEDPHGEDGPEPILDAARPAVRPSRPEDPGVPSTQTP
4. KOS|UL54     MATDIDMLIDLGLDLSDSDLDEDPPEPAESRRDDLESDSNGECSSSDEDMEDPHGEDGPEPILDAARPAVRPSRPEDPGVPSTQTP
5. McKr|UL54    MATDIDMLIDLGLDLSDSDLDEDPPEPAESRRDDLASDSSGECSSSDEDMEDPHGEDGPEPILDAARPAVRPSRPEDPGVPSTQTP
6. HF10|UL54    MATDIDMLIDLGLDLSDSDLDEDPPEPAESRRDDLESDSSGECSSSDEDMEDPHGEDGPEPILDAARPAVRPSRPEDPGVPSTQTP
7. CR38|UL54    MATDIDMLIDLGLDLSDSDLDEDPPEPAESRRDDLESDSIGECSSSDEDMEDPHGEDGPEPILDAARPAVRPSRPEDPGVPSTQTP
8. E03|UL54     MATDIDMLIDLGLDLSDSDLDEDPPEPAESRRDDLESDSSGECSSSDEDMEDPRGEDGPEPILDAARPAVRPSRPEDPGVPSTQTP
9. E06|UL54     MATDIDMLIDLGLDLSDSDLDEDPPEPAESRRDDLESYSSGECSSSDEDMEDPRGEDGPELLILDAARPAVRPSRPEDPGVPSTQTP
10. E07|UL54    MATDIDMLIDLGLDLSDSDLDEDPPEPAESRRDDLESDSSGECSSSDEDMEDPHGEDGPEPILDAARPAVRPSRPEDPGVPSTQTP
11. E08|UL54    MATDIDMLIDLGLDLSDSDLDEDPPEPAESRRDDLESDSSGECSSSDEDMEDPHGEDGPEPILDAARPAVRPSRPEDPGVPSTQTP
12. E10|UL54    MATDIDMLIDLGLDLSDSDLDEDPPEPAESRRDDLESYSSGECSSSDEDMEDPRGEDGPELLILDAARPAVRPSRPEDPGVPSTQTP
13. E11|UL54    MATDIDMLIDLGLDLSDSDLDEDPPEPAESRRDDLESYSSGECSSSDEDMEDPRGEDGPELLILDAARPAVRPSRPEDPGVPSTQTP
14. E12|UL54    MATDIDMLIDLGLDLSDSDLDEDPPEPAESRRDDLESDSSGECSSSDEDMEDPHGEDGPEPILDAARPAVRPSRPEDPGVPSTQTP
15. E13|UL54    MATDIDMLIDLGLDLSDSDLDEDPPEPAESRRDDLESDSSGECSSSDEDMEDPHGEDGPEPILDAARPAVRPSRPEDPGVPSTQTP
16. E14|UL54    MATDIDMLIDLGLDLSDSDLDEDPPEPAESRRDDLESDSSGECSSSDEDMEDPHGEDGPEPILDAARPAVRPSRPEDTGVPSTQTP
17. E15|UL54    MATDIDMLIDLGLDLSDSDLDEDPPEPAESRRDDLESYSSGECSSSDEDMEDPRGEDGPELLILDAARPAVRPSRPEDPGVPSTQTP
18. E19|UL54    MATDIDMLIDLGLDLSDSDLDEDPPEPAESRRDDLESDSSGECSSSDEDMEDPHGEDGPEPILDAARPAVRPSRPEDPGVPSTQTP
19. E22|UL54    MATDIDMLIDLGLDLSDSDLDEDPPEPAESRRDDLESYSSGECSSSDEDMEDPRGEDGPELLILDAARPAVRPSRPEDPGVPSTQTP
20. E23|UL54    MATDIDMLIDLGLDLSDSDLDEDPPEPAESRRDDLESYSSGECSSSDEDMEDPRGEDGPELLILDAARPAVRPSRPEDPGVPSTQTP
21. E25|UL54    MATDIDMLIDLGLDLSDSDLDEDPPEPAESRRDDLESYSSGECSSSDEDMEDPRGEDGPELLILDAARPAVRPSRPEDPGVPSTQTP
22. E35|UL54    MATDIDMLIDLGLDLSDSDLDEDPPEPAESRRDDLESYSSGECSSSDEDMEDPRGEDGPELLILDAARPAVRPSRPEDPGVPSTQTP
23. R11|UL54    MATDIDMLIDLGLDLSDSDLDEDPPEPAESRRDDLESDSSGECSSSDEDMEDPHGEDGPEPILDAARPAVRPSRPEDPGVPSTQTP
24. R62|UL54    MATDIDMLIDLGLDLSDSDLDEDPPEPAESRRDDLASDSSGECSSSDEDMEDPHGEDGPEPILDAARPAVRPSRPEDPGVPSTQTP
25. S23|UL54    MATDIDMLIDLGLDLSDSDLDEDPPEPAESRRDDLASDSSGECSSSDEDMEDPHGEDGPEPILDAARPAVRPSRPEDPGVPSTQTP
26. S25|UL54    MATDIDMLIDLGLDLSDSDLDEDPPEPAESRRDDLASDSSGECSSSDEDMEDPHGEDGPEPILDAARPAVRPSRPEDPGVPSTQTP

                90        100       110       120       130       140       150       160       170
Consensus       RPTERQGPNDPQPAPHSVWSRLGARRPSCSPEQHGGKVARLQPPPTKAQPARGGRRGRRRGRGRGGPGAADGLSDPRRRAPRTNRN
Identity        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

1. 17v2|UL54   RPTERQGPNDPQPAPHSVWSRLGARRPSCSPEQHGGKVARLQPPPTKAQPARGGRRGRRRGRGRGGPGAADGLSDPRRRAPRTNRN
2. F|UL54       RPTERQGPNDPQPAPHSVWSRLGARRPSCSPEQHGGKVARLQPPPTKAQPARGGRRGRRRGRGRGGPGAADGLSDPRRRAPRTNRN
3. H129|UL54    RPTERQGPNDPQPAPHSVWSRLGARRPSCSPEQHGGKVARLQPPPTKAQPARGGRRGRRRGRGRGGPGVADGLSDPRRRAPRTNRN
4. KOS|UL54     RPTERQGPNDPQPAPHSVWSRLGARRPSCSPERHGGKVARLQPPPTKAQPARGGRRGRRRGRGRGGPGAADGLSDPRRRAPRTNRN
5. McKr|UL54    RPTERQGPNDPQPAPHSVWSRLGARRPSCSPEQHGGKVARLQPPPTKAQPARGGRRGRRRGRGRGGPGAADGLSDPRRRAPRTNRN
6. HF10|UL54    RPTERQGPNDPQPAPHSVWSRLGARRPSCSPEQHGGKVARLQPPPTKAQPVRGGRRGRRRGRGRGGPGAADGLSDPRRRAPRTNRN
7. CR38|UL54    RPTERQGPNDPQPAPHSVWSRLGARRPSCSPEQHGGKVARLQPPPTKAQPARGGRRGRRRGRGRGGPGAADGLSDPRRRAPRTNRN
8. E03|UL54     RPTERQGPNDPQPAPHSVWSRLGARRPSCSPEQHGGKVARLQPPPTKAQPARGGRRGRRRGRGRGGPGAADGLSDPRRRAPRTNRN
9. E06|UL54     RPTERQGPNDHQSAPHSVWSRLGARRPSCSPEQHGGKVARLQPPPTKAQPARGGRRGRRRGRGRGGPGAADGLSDPRRRAPRTNRN
10. E07|UL54    RPTERQGPNDPQPAPHSVWSRLGARRPSCSPEQHGGKVARLQPPPTKAQPARGGRRGRRRGRGRGGPGAADGLSDPRRRAPRTNRN
11. E08|UL54    RPTERQGPNDPQPAPHSVWSRLGARRPSCSPEQHGGKVARLQPPPTKAQPARGGRRGRRRGRGRGGPGAADGLSDPRRRAPRTNRN
12. E10|UL54    RPTERQGPNDHQSAPHSVWSRLGARRPSCSPEQHGGKVARLQPPPTKAQPARGGRRGRRRGRGRGGPGAADGLSDPRRRAPRTNRN
13. E11|UL54    RPTERQGPNDHQSAPHSVWSRLGARRPSCSPEQHGGKVARLQPPPTKAQPARGGRRGRRRGRGRGGPGAADGLSDPRRRAPRTNRN
14. E12|UL54    RPTGRQGPNDPQPAPHSVWSRLGARRPSCSPEQHGGKVARLQPPPTKAQPARGGRRGRRRGRGRGGPGAADGLSDPRRRAPRTNRN
15. E13|UL54    RPTERQGPNDPQPAPHSVWSRLGARRPSCSPEQHGGKVARLQPPPTKAQPARGGRRGRRRGRGRGGPGAADGLSDPRRRAPRTNRN
16. E14|UL54    RPTERQGPNDPQPAPHSVWSRLGARRPSCSPEQHGGKVARLQPPPTKAQPARGGRRGRRRGRGRGGPGAADGLSDPRRRAPRTNRN
17. E15|UL54    RPTERQGPNDHQSAPHSVWSRLGARRPSCSPEQHGGKVARLQPPPTKAQPARGGRRGRRRGRGRGGPGAADGLSDPRRRAPRTNRN
18. E19|UL54    RPTERQGPNDPQPAPHSVWSRLGARRPSCSPEQHGGKVARLQPPPTKAQPARGGRRGRRRGRGRGGPGAADGLSDPRRRAPRTNRN
19. E22|UL54    RPTERQGPNDHQSAPHSVWSRLGARRPSCSPEQHGGKVARLQPPPTKTQPARGGRRGRRRGRGRGGPGAADGLSDPRRRAPRTNRN
20. E23|UL54    RPTERQGPNDHQSAPHSVWSRLGARRPSCSPEQHGGKVARLQPPPTKAQPARGGRRGRRRGRGRGGPGAADGLSDPRRRAPRTNRN
21. E25|UL54    RPTERQGPNDHQSAPHSVWSRLGARRPSCSPEQHGGKVARLQPPPTKAQPARGGRRGRRRGRGRGGPGAADGLSDPRRRAPRTNRN
22. E35|UL54    RPTERQGPNDHQSAPHSVWSRLGARRPSCSPEQHGGKVARLQPPPTKAQPARGGRRGRRRGRGRGGPGAADGLSDPRRRAPRTNRN
23. R11|UL54    RPTERQGPNDPQPAPHSVWSRLGARRPSCSPEQHGGKVARLQPPPTKAQPARGGRRGRRRGRGRGGPGAADGLSDPRRRAPRTNRN
24. R62|UL54    RPTERQGPNDPQPAPHSVWSRLGARRPSCSPEQHGGKVARLQPPPTKAQPARGGRRGRRRGRGRGGPGAADGLSDPRRRAPRTNRN
25. S23|UL54    RPTERQGPNDPQPAPHSVWSRLGARRPSCSPEQHGGKVARLQPPPTKAQPARGGRRGRRRGRGRGGPGAADGLSDPRRRAPRTNRN
26. S25|UL54    RPTERQGPNDPQPAPHSVWSRLGARRPSCSPEQHGGKVARLQPPPTKAQPARGGRRGRRRGRGRGGPGAADGLSDPRRRAPRTNRN

                180       190       200       210       220       230       240       250
Consensus       PGGPRPGAGWTDGPGAPHGEAWRGSEQPDPPGGPRTRGVRQAPPPLMTLAIAPPPADPRAPAPERKAPAADTIDATTRLVLRSISE
Identity        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

1. 17v2|UL54   PGGPRPGAGWTDGPGAPHGEAWRGSEQPDPPGGQRTRGVRQAPPPLMTLAIAPPPADPRAPAPERKAPAADTIDATTRLVLRSISE
2. F|UL54       PGGPRPGAGWTDGPGAPHGEAWRGSEQPDPPGGPRTRGVRQAPPPLMTLAIAPPPADPRAPAPERKAPAADTIDATTRLVLRSISE
3. H129|UL54    PGGPRPGAGWTDGPGAPHGEAWRGSEQPDPPGGPRTRGVRQAPPPLMTLAIAPPPADPRAPAPERKAPAADTIDATTRLVLRSISE
4. KOS|UL54     PGGPRPGAGWTDGPGAPHGEAWRGSEQPDPPGGPRTRSVRQAPPPLMTLAIAPPPADPRAPAPERKAPAADTIDATTRLVLRSISE
5. McKr|UL54    PGGPRPGAGWTDGPGAPHGEAWRGSEQPDPPGGPRTRGVRQAPPPLMTLAIAPPPADPRAPAPERKAPAADTIDATTRLVLRSISE
6. HF10|UL54    PGGPRPGAGWTDGPGAPHGEAWRGSEQPDPPGGPRTRGVRQAPPPLMTLAIAPPPADPRAPAPERKAPAADTIDATTRLVLRSISE
7. CR38|UL54    PGGPRPGAGWTDGPGAPHGEAWRGSEQPDPPGGPRTRGVRQAPPPLMTLAIAPPPADPRAPAPERKAPAADTIDATTRLVLRSISE
8. E03|UL54     PGGPRPGAGWTDGPGAPHGEAWRGSEQPDPPGGPRTRGVRQAPPPLMTLAIAPPPADPRAPAPERKAPATDTIDATTRLVLRSISE
9. E06|UL54     PGGPRPGAGWTDGPGAPHGEAWRGSEQPDPPGGPRTRGVRQAPPPLMTLAIAPPPTDPRAPAPERKAPATDTIDATTRLVLRSISE
10. E07|UL54    PGGPRPGAGWTDGPGAPHGEAWRGSEQPDPPGGPRTRGVRQAPPPLMTLAIAPPPADPRAPAPERKAPAADTIDATTRLVLRSISE
11. E08|UL54    PGGPRPGAGWTDGPGAPHGEAWRGSEQPDPPGGPRTRGVRQAPPPLMTLAIAPPPADPRAPAPERKAPAADTIDATTRLVLRSISE
12. E10|UL54    PGGPRPGAGWTDGPGAPHGEAWRGSEQPDPPGGPRTRGVRQAPPPLMTLAIAPPPTDPRAPAPERKAPATDTIDATTRLVLRSISE
13. E11|UL54    PGGPRPGAGWTDGPGAPHGEAWRGSEQPDPPGGPRTRGVRQAPPPLMTLAIAPPPTDPRAPAPERKAPATDTIDATTRLVLRSISE
14. E12|UL54    PGGPRPGAGWTDGPGAPHGEAWRGSEQPDPPGGPRTRGVRQAPPPLMTLAIAPPPADPRAPAPERKAPAADTIDATTRLVLRSISE
15. E13|UL54    PGGPRPGAGWTDGPGAPHGEAWRGSEQPDPPGGPRTRGVRQAPPPLMTLAIAPPPADPRAPAPERKAPAADTIDATTRLVLRSISE
16. E14|UL54    QGGPRPGAGWTDGPGAPHGEAWRGSEQPDPPGGPRTRGVRQAPPPLMTLAIAPPPADPRAPAPERKAPAADTIDATTRLVLRSISE
17. E15|UL54    PGGPRPGAGWTDGPGAPHGEAWRGSEQPDPPGGPRTRGVRQAPPPLMTLAIAPPPTDPRAPAPERKAPATDTIDATTRLVLRSISE
18. E19|UL54    PGGPRPGAGWTDGPGAPHGEAWRGSEQPDPPGGPRTRGVRQAPPPLMTLAIAPPPADPRAPAPERKAPAADTIDATTRLVLRSISE
19. E22|UL54    PGGPRPGAGWTDGPGAPHGEAWRGSEQPDPPGGPRTRGVRQAPPPLMTLAIAPPPTDPRAPAPERKAPATDTIDATTRLVLRSISE
20. E23|UL54    PGGPRPGAGWTDGPGAPHGEAWRGSEQPDPPGGPRTRGVRQAPPPLMTLAIAPPPTDPRAPAPERKAPATDTIDATTRLVLRSISE
21. E25|UL54    PGGPRPGAGWTDGPGAPHGEAWRGSEQPDPPGGPRTRGVRQAPPPLMTLAIAPPPTDPRAPAPERKAPATDTIDATTRLVLRSISE
22. E35|UL54    PGGPRPGAGWTDGPGAPHGEAWRGSEQPDPPGGPRTRGVRQAPPPLMTLAIAPPPTDPRAPAPERKAPATDTIDATTRLVLRSISE
23. R11|UL54    PGGPRPGAGWTDGPGAPHGEAWRGSEQPDPPGGPRTRGVRQAPPPLMTLAIAPPPADPRAPAPERKAPAADTIDATTRLVLRSISE
24. R62|UL54    PGGPRPGAGWTDGPGAPHGEAWRGSEQPDPPGGPRTRGGRQAPPPLMTLAIAPPPADPRAPAPERKAPAADTIDATTRLVLRSISE
25. S23|UL54    PGGPRPGAGWTDGPGAPHGEAWRGSEQPDPPGGPRTRGGRQAPPPLMTLAIAPPPADPRAPAPERKAPAADTIDATTRLVLRSISE
26. S25|UL54    PGGPRPGAGWTDGPGAPHGEAWRGSEQPDPPGGPRTRGGRQAPPPLMTLAIAPPPADPRAPAPERKAPAADTIDATTRLVLRSISE

                260       270       280       290       300       310       320       330       340
Consensus       RAAVDRISESFGRSAQVMHDPFGGQPFPAANSPWAPVLAGQGGPFDAETRRVSWETLVAHGPSLYRTFAGNPRAASTAKAMRDCVL
Identity        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

1. 17v2|UL54   RAAVDRISESFGRSAQVMHDPFGGQPFPAANSPWAPVLAGQGGPFDAETRRVSWETLVAHGPSLYRTFAGNPRAASTAKAMRDCVL
2. F|UL54       RAAVDRISESFGRSAQVMHDPFGGQPFPAANSPWAPVLAGQGGPFDAETRRVSWETLVAHGPSLYRTFAGNPRAASTAKAMRDCVL
3. H129|UL54    RAAVDRISESFGRSAQVMHDPFGGQPFPAANSPWAPVLAGQGGPFDAETRRVSWETLVAHGPSLYRTFAGNPRAASTAKAMRDCVL
4. KOS|UL54     RAAVDRISESFGRSAQVMHDPFGGQPFPAANSPWAPVLAGQGGPFDAETRRVSWETLVAHGPSLYRTFAGNPRAASTAKAMRDCVL
5. McKr|UL54    RAAVDRISESFGRSAQVMHDPFGGQPFPAANSPWAPVLAGQGGPFDAETRRVSWETLVAHGPSLYRTFAGNPRAASTAKAMRDCVL
6. HF10|UL54    RAAVDRISESFGRSAQVMHDPFGGQPFPAANSPWAPVLAGQGGPFDAETRRVSWETLVAHGPSLYRTFAGNPRAASTAKAMRDCVL
7. CR38|UL54    RAAVDRISESFGRSAQVMHDPFGGQPFPAANSPWAPVLAGQGGPFDAETRRVSWETLVAHGPSLYRTFAGNPRAASTAKAMRDCVL
8. E03|UL54     RAAVDRISESFGRSAQVMHDPFGGQPFPAANSPWAPVLAGQGGPFDAETRRVSWETLVAHGPSLYRTFAGNPRAASTAKAMRDCVL
9. E06|UL54     RAAVDRISESFGRSAQVMHDPFGGQPFPAANSPWAPVLAGQGGPFDAETRRVSWETLVAHGPSLYRTFAGNPRAASTAKAMRDCVL
10. E07|UL54    RAAVDRISESFGRSAQVMHDPFGGQPFPAANSPWAPVLAGQGGPFDAETRRVSWETLVAHGPSLYRTFAGNPRAASTAKAMRDCVL
11. E08|UL54    RAAVDRISESFGRSAQVMHDPFGGQPFPAANSPWAPVLAGQGGPFDAETRRVSWETLVAHGPSLYRTFAGNPRAASTAKAMRDCVL
12. E10|UL54    RAAVDRISESFGRSAQVMHDPFGGQPFPAANSPWAPVLAGQGGPFDAETRRVSWETLVAHGPSLYRTFAGNPRAASTAKAMRDCVL
13. E11|UL54    RAAVDRISESFGRSAQVMHDPFGGQPFPAANSPWAPVLAGQGGPFDAETRRVSWETLVAHGPSLYRTFAGNPRAASTAKAMRDCVL
14. E12|UL54    RAAVDRISESFGRSAQVMHDPFGGQPFPAANSPWAPVLAGQGGPFDAETRRVSWETLVAHGPSLYRTFAGNPRAASTAKAMRDCVL
15. E13|UL54    RAAVDRISESFGRSAQVMHDPFGGQPFPAANSPWAPVLAGQGGPFDAETRRVSWETLVAHGPSLYRTFAGNPRAASTAKAMRDCVL
16. E14|UL54    RAAVDRISESFGRSAQVMHDPFGGQPFPAANSPWAPVLAGQGGPFDAETRRVSWETLVAHGPSLYRTFAGNPRAASTAKAMRDCVL
17. E15|UL54    RAAVDRISESFGRSAQVMHDPFGGQPFPAANSPWAPVLAGQGGPFDAETRRVSWETLVAHGPSLYRTFAGNPRAASTAKAMRDCVL
18. E19|UL54    RAAVDRISESFGRSAQVMHDPFGGQPFPAANSPWAPVLAGQGGPFDAETRRVSWETLVAHGPSLYRTFAGNPRAASTAKAMRDCVL
19. E22|UL54    RAAVDRISESFGRSAQVMHDPFGGQPFPAANSPWAPVLAGQGGPFDAETRRVSWETLVAHGPSLYRTFAGNPRAASTAKAMRDCVL
20. E23|UL54    RAAVDRISESFGRSAQVMHDPFGGQPFPAANSPWAPVLAGQGGPFDAETRRVSWETLVAHGPSLYRTFAGNPRAASTAKAMRDCVL
21. E25|UL54    RAAVDRISESFGRSAQVMHDPFGGQPFPAANSPWAPVLAGQGGPFDAETRRVSWETLVAHGPSLYRTFAGNPRAASTAKAMRDCVL
22. E35|UL54    RAAVDRISESFGRSAQVMHDPFGGQPFPAANSPWAPVLAGQGGPFDAETRRVSWETLVAHGPSLYRTFAGNPRAASTAKAMRDCVL
23. R11|UL54    RAAVDRISESFGRSAQVMHDPFGGQPFPAANSPWAPVLAGQGGPFDAETRRVSWETLVAHGPSLYRTFAGNPRAASTAKAMRDCVL
24. R62|UL54    RAAVDRISESFGRSAQVMHDPFGGQPFPAANSPWAPVLADQGGPFDAETRRVSWETLVAHGPSLYRTFAGNPRAASTAKAMRDCVL
25. S23|UL54    RAAVDRISESFGRSAQVMHDPFGGQPFPAANSPWAPVLADQGGPFDAETRRVSWETLVAHGPSLYRTFAGNPRAASTAKAMRDCVL
26. S25|UL54    RAAVDRISESFGRSAQVMHDPFGGQPFPAANSPWAPVLADQGGPFDAETRRVSWETLVAHGPSLYRTFAGNPRAASTAKAMRDCVL

                350       360       370       380       390       400       410       420       430
Consensus       RQENFIEALASADETLAWCKMCIHHNLPLRPQDPIIGTAAAVLDNLATRLRPFLQCYLKARGLCGLDELCSRRRLADIKDIASFVF
Identity        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

1. 17v2|UL54   RQENFIEALASADETLAWCKMCIHHNLPLRPQDPIIGTAAAVLDNLATRLRPFLQCYLKARGLCGLDELCSRRRLADIKDIASFVF
2. F|UL54       RQENFIEALASADETLAWCKMCIHHNLPLRPQDPIIGTAAAVLDNLATRLRPFLQCYLKARGLCGLDELCSRRRLADIKDIASFVF
3. H129|UL54    RQENFIEALASADETLAWCKMCIHHNLPLRPQDPIIGTAAAVLDNLATRLRPFLQCYLKARGLCGLDELCSRRRLADIKDIASFVF
4. KOS|UL54     RQENFIEALASADETLAWCKMCIHHNLPLRPQDPIIGTAAAVLDNLATRLRPFLQCYLKARGLCGLDELCSRRRLADIKDIASFVF
5. McKr|UL54    RQENFIEALASADETLAWCKMCIHHNLPLRPQDPIIGTAAAVLDNLATRLRPFLQCYLKARGLCGLDELCSRRRLADIKDIASFVF
6. HF10|UL54    RQENFIEALASADETLAWCKMCIHHNLPLRPQDPIIGTAAAVLDNLATRLRPFLQCYLKARGLCGLDELCSRRRLADIKDIASFVF
7. CR38|UL54    RQENFIEALASADETLAWCKMCIHHNLPLRPQDPIIGTAAAVLDNLATRLRPFLQCYLKARGLCGLDELCSRRRLADIKDIASFVF
8. E03|UL54     RQENFIEALASADETLAWCKMCIHHNLPLRPQDPIIGTAAAVLDNLATRLRPFLQCYLKARGLCGLDELCSRRRLADIKDIASFVF
9. E06|UL54     RQENFIEALASADETLAWCKMCIHHNLPLRPQDPIIGTAAAVLDNLATRLRPFLQCYLKARGLCGLDELCSRRRLADIKDIASFVF
10. E07|UL54    RQENFIEALASADETLAWCKMCIHHNLPLRPQDPIIGTAAAVLDNLATRLRPFLQCYLKARGLCGLDELCSRRRLADIKDIASFVF
11. E08|UL54    RQENFIEALASADETLAWCKMCIHHNLPLRPQDPIIGTAAAVLDNLATRLRPFLQCYLKARGLCGLDELCSRRRLADIKDIASFVF
12. E10|UL54    RQENFIEALASADETLAWCKMCIHHNLPLRPQDPIIGTAAAVLDNLATRLRPFLQCYLKARGLCGLDELCSRRRLADIKDIASFVF
13. E11|UL54    RQENFIEALASADETLAWCKMCIHHNLPLRPQDPIIGTAAAVLDNLATRLRPFLQCYLKARGLCGLDELCSRRRLADIKDIASFVF
14. E12|UL54    RQENFIEALASADETLAWCKMCIHHNLPLRPQDPIIGTAAAVLDNLATRLRPFLQCYLKARGLCGLDELCSRRRLADIKDIASFVF
15. E13|UL54    RQENFIEALASADETLAWCKMCIHHNLPLRPQDPIIGTAAAVLDNLATRLRPFLQCYLKARGLCGLDELCSRRRLADIKDIASFVF
16. E14|UL54    RQENFIEALASADETLAWCKMCIHHNLPLRPQDPIIGTAAAVLDNLATRLRPFLQCYLKARGLCGLDELCSRRRLADIKDIASFVF
17. E15|UL54    RQENFIEALASADETLAWCKMCIHHNLPLRPQDPIIGTAAAVLDNLATRLRPFLQCYLKARGLCGLDELCSRRRLADIKDIASFVF
18. E19|UL54    RQENFIEALASADETLAWCKMCIHHNLPLRPQDPIIGTAAAVLDNLATRLRPFLQCYLKARGLCGLDELCSRRRLADIKDIASFVF
19. E22|UL54    RQENFIEALASADETLAWCKMCIHHNLPLRPQDPIIGTAAAVLDNLATRLRPFLQCYLKARGLCGLDELCSRRRLADIKDIASFVF
20. E23|UL54    RQENFIEALASADETLAWCKMCIHHNLPLRPQDPIIGTAAAVLDNLATRLRPFLQCYLKARGLCGLDELCSRRRLADIKDIASFVF
21. E25|UL54    RQENFIEALASADETLAWCKMCIHHNLPLRPQDPIIGTAAAVLDNLATRLRPFLQCYLKARGLCGLDELCSRRRLADIKDIASFVF
22. E35|UL54    RQENFIEALASADETLAWCKMCIHHNLPLRPQDPIIGTAAAVLDNLATRLRPFLQCYLKARGLCGLDELCSRRRLADIKDIASFVF
23. R11|UL54    RQENFIEALASADETLAWCKMCIHHNLPLRPQDPIIGTAAAVLDNLATRLRPFLQCYLKARGLCGLDELCSRRRLADIKDIASFVF
24. R62|UL54    RQENFIEALASADETLAWCKMCIHHNLPLRPQDPIIGTAAAVLDNLATRLRPFLQCYLKARGLCGLDELCSRRRLADIKDIASFVF
25. S23|UL54    RQENFIEALASADETLAWCKMCIHHNLPLRPQDPIIGTAAAVLDNLATRLRPFLQCYLKARGLCGLDELCSRRRLADIKDIASFVF
26. S25|UL54    RQENFIEALASADETLAWCKMCIHHNLPLRPQDPIIGTAAAVLDNLATRLRPFLQCYLKARGLCGLDELCSRRRLADIKDIASFVF

                440       450       460       470       480       490       500       512
Consensus       VILARLANRVERGVAEIDYATLGVGVGEKMHFYLPGACMAGLIEILDTHRQECSSRVCELTASHIVAPPYVHGKYFYCNSLF
Identity        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

1. 17v2|UL54   VILARLANRVERGVAEIDYATLGVGVGEKMHFYLPGACMAGLIEILDTHRQECSSRVCELTASHIVAPPYVHGKYFYCNSLF
2. F|UL54       VILARLANRVERGVAEIDYATLGVGVGEKMHFYLPGACMAGLIEILDTHRQECSSRVCELTASHIVAPPYVHGKYFYCNSLF
3. H129|UL54    VILARLANRVERGVAEIDYATLGVGVGEKMHFYLPGACMAGLIEILDTHRQECSSRVCELTASHIVAPPYVHGKYFYCNSLF
4. KOS|UL54     VILARLANRVERGVAEIDYATLGVGVGEKMHFYLPGACMAGLIEILDTHRQECSSRVCELTASHIVAPPYVHGKYFYCNSLF
5. McKr|UL54    VILARLANRVERGVAEIDYATLGVGVGEKMHFYLPGACMAGLIEILDTHRQECSSRVCELTASHIVAPPYVHGKYFYCNSLF
6. HF10|UL54    VILARLANRVERGVAEIDYATLGVGVGEKMHFYLPGACMAGLIEILDTHRQECSSRVCELTASHIVAPPYVHGKYFYCNSLF
7. CR38|UL54    VILARLANRVERGVAEIDYATLGVGVGEKMHFYLPGACMAGLIEILDTHRQECSSRVCELTASHIVAPPYVHGKYFYCNSLF
8. E03|UL54     VILARLANRVERGVAEIDYATLGVGVGEKMHFYIPGACMGGLIEILDTHRQECSSRVCELTASHIVAPPYVHGKYFYCNSLF
9. E06|UL54     VILARLANRVERGVAEIDYATLGVGVGEKMHFYIPGACMGGLIEILDTHRQECSSRVCELTASHIVAPPYVHGKYFYCNSLF
10. E07|UL54    VILARLANRVERGVAEIDYATLGVGVGEKMHFYLPGACMAGLIEILDTHRQECSSRVCELTASHIVAPPYVHGKYFYCNSLF
11. E08|UL54    VILARLANRVERGVAEIDYATLGVGVGEKMHFYLPGACMAGLIEILDTHRQECSSRVCELTASHIVAPPYVHGKYFYCNSLF
12. E10|UL54    VILARLANRVERGVAEIDYATLGVGVGEKMHFYIPGACMGGLIEILDTHRQECSSRVCELTASHIVAPPYVHGKYFYCNSLF
13. E11|UL54    VILARLANRVERGVAEIDYATLGVGVGEKMHFYIPGACMGGLIEILDTHRQECSSRVCELTASHIVAPPYVHGKYFYCNSLF
14. E12|UL54    VILARLANRVERGVAEIDYATLGVGVGEKMHFYLPGACMAGLIEILDTHRQECSSRVCELTASHIVAPPYVHGKYFYCNSLF
15. E13|UL54    VILARLANRVERGVAEIDYATLGVGVGEKMHFYLPGACMAGLIEILDTHRQECSSRVCELTASHIVAPPYVHGKYFYCNSLF
16. E14|UL54    VILARLANRVERGVAEIDYATLGVGVGEKMHFYLPGACMAGLIEILDTHRQECSSRVCELTASHIVAPPYVHGKYFYCNCLF
17. E15|UL54    VILARLANRVERGVAEIDYATLGVGVGEKMHFYIPGACMGGLIEILDTHRQECSSRVCELTASHIVAPPYVHGKYFYCNSLF
18. E19|UL54    VILARLANRVERGVAEIDYATLGVGVGEKMHFYLPGACMAGLIEILDTHRQECSSRVCELTASHIVAPPYVHGKYFYCNSLF
19. E22|UL54    VILARLANRVERGVAEIDYATLGVGVGEKMHFYIPGACMGGLIEILDTHRQECSSRVCELTASHIVAPPYVHGKYFYCNSLF
20. E23|UL54    VILARLANRVERGVAEIDYATLGVGVGEKMHFYIPGACMGGLIEILDTHRQECSSRVCELTASHIVAPPYVHGKYFYCNSLF
21. E25|UL54    VILARLANRVERGVAEIDYATLGVGVGEKMHFYIPGACMGGLIEILDTHRQECSSRVCELTASHIVAPPYVHGKYFYCNSLF
22. E35|UL54    VILARLANRVERGVAEIDYATLGVGVGEKMHFYIPGACMGGLIEILDTHRQECSSRVCELTASHIVAPPYVHGKYFYCNSLF
23. R11|UL54    VILARLANRVERGVAEIDYATLGVGVGEKMHFYLPGACMAGLIEILDTHRQECSSRVCELTASHIVAPPYVHGKYFYCNSLF
24. R62|UL54    VILARLANRVERGVAEIDYATLGVGVGEKMHFYLPGACMAGLIEILDTHRQECSSRVCELTASHIVAPPYVHGKYFYCNSLF
25. S23|UL54    VILARLANRVERGVAEIDYATLGVGVGEKMHFYLPGACMAGLIEILDTHRQECSSRVCELTASHIVAPPYVHGKYFYCNSLF
26. S25|UL54    VILARLANRVERGVAEIDYATLGVGVGEKMHFYLPGACMAGLIEILDTHRQECSSRVCELTASHIVAPPYVHGKYFYCNSLF
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